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Analysis of Epistaxis of Pregnancy and Association with Postpartum Hemorrhage

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Abstract

Epistaxis is a frequent condition that affects up to 70% of the general population at some point in their lives. A smaller percentage of people will experience recurring or habitual epistaxis during pregnancy, which is linked to postpartum hemorrhage. The goal of this study was to determine the prevalence of epistaxis among pregnant women and the relationship between it and postpartum hemorrhage. There was a statistically significant difference in the incidence of postpartum hemorrhage between patients with pregnancy epistaxis and patients without pregnancy epistaxis, according to the findings. Finally, the researchers found that though epistaxis is not a common complication during pregnancy, it does raise the risk of postpartum hemorrhage.

Keywords— Incidance, Post partum heamorrage, Epistaxis , Private Hospitals, Kurdistan.

I. INTRODUCTION

Epistaxis is a prevalent affliction that affects up to 60% of the general population at some point during their lives (Yusof et al. 2020). A lesser percentage of people affected will experience recurring or habitual epistaxis, which has been linked to an elevated risk of disrupted hemostasis, according to research (Azcona-Sutil et al. 2020). Although epistaxis can have an anterior or posterior source, it most often originates in the anterior nasal cavity, as family physicians frequently encounter patients with epistaxis in rare cases, this condition can lead to massive bleeding (Swain et al. 2020). Although epistaxis can have an anterior or posterior source, it most often originates in the anterior nasal cavity. Although a considerable proportion of nosebleeds occur for no apparent reason, the causes of nosebleeds can be separated into two categories: local and general influences (Al-Dosari et al. 2021).

Foreign bodies, blunt trauma (typically a sharp blow to the face, such as a punch), and blunt trauma (typically a sharp blow to the face, such as a punch) are all local factors. An inflammatory response occurs (e.g. acute respiratory tract infections, chronic sinusitis, rhinitis or environmental irritants). Other aspects to consider are (Dupuis et al. 2020): Anatomical abnormalities are a type of anatomical deformity that occurs when (e.g., septal spurs or hereditary hemorrhagic telangiectasia). Medications that have been suffocated (particularly cocaine) Tumors in the nose and mouth are known as intranasal tumors (e.g. nasopharyngeal carcinoma or nasopharyngeal angiofibroma) (Peng et al. 2021). Inhaled air has a low relative humidity (particularly during cold winter seasons). However, there isn't much evidence to back this up. The reason of the bleeding is usually determined through a detailed history and physical examination (Elkhateb et al. 2021). The internal carotid arteries' branches, as well as the facial and internal maxillary divisions of the external carotid arteries, provide a substantial circulatory supply for the nose (Lee et al. 2020). Obstetricians typically feel that the prevalence of epistaxis in pregnancy is higher than in the general non-pregnant population. Estrogen-related vascular congestion and mucosal edema are thought to be the cause of this findings. Preoperatively, obtaining a history of epistaxis has become an useful technique for identifying patients who may be at risk of substantial intraoperative bleeding. It's still unclear whether pregnant epistaxis is linked to disrupted hemostasis and can indicate an increased risk of obstetric hemorrhage (Weingarten et al. 2021).

Research Objective

The goal of this study was to determine the prevalence of epistaxis in pregnant women and non-pregnant women of reproductive age. The researchers also wanted to see if there was a link between pregnant epistaxis and postpartum hemorrhage. Epistaxis during pregnancy is assumed to be linked to local mucosal and vascular changes in the nose, rather than an underlying bleeding issue.

II. METHODS

Between February and September 2020, a list of 300 pregnant patients admitted to private Hospitals' labor rooms for delivery and 115 non-pregnant individuals attend private Hospitals' outpatient clinics. The gestational age of the pregnant women ranged from 36 to 40 weeks, while their ages ranged from 28 to 40. The reproductive age of the non-pregnant women ranged from 26 to 46 years. All patients signed a form of informed consent (written consent). All patients had to complete an 18-question survey that included their obstetric history, previous history of epistaxis, and medications such as non-steroidal anti-inflammatory drugs, as well as other questions. Patients with known bleeding or clothing disorders, as well as pregnancy-induced hypertension, were excluded. The use of ultrasonic agents beyond routine, as well as the requirement for blood transfusions during labor, mode of delivery, and type of anesthetic, bleeding, and other statistical data analysis, were all performed using SPSS version 23. The 2 test was used to assess the prevalence of epistaxis between pregnant and nonpregnant participants, as well as the rates of postpartum hemorrhage between pregnant women with and without epistaxis. The odds ratios were estimated using a 95% confidence interval. Other study factors that were compared between pregnant women with and without a history of epistaxis were compared using univariate analysis utilizing the 2 test: history of seasonal allergies, recent respiratory infection, easy bruising, patient's blood type, and delivery method. A logistic regression analysis was intended to investigate the effect of those variables on postpartum hemorrhage if significant differences were discovered in the univariate analysis. A pregnancy is used in every statistical analysis. Postpartum hemorrhage was defined as an estimated blood loss of more than 500mL for a vaginal delivery and more than 1000mL for a cesarean birth that adversely affected the patients' overall status. The key outcomes were (1) rates of epistaxis in pregnant women versus non-pregnant women, and (2) rates of postpartum hemorrhage in women with epistaxis versus those without epistaxis.

III. FINDINGS

On 300 pregnant patients and 115 non-pregnant patients, the final data analysis was carried out.

Table.1: Pregnant Patients Age

	Range	Average
Age	28-40	32 ±8

According to table (1), the average age (standard deviation) of pregnant women was (32±8) years.

Table.2: Non Pregnant Patients Age

	Range	Average
Age	26-46	36 ±8

According to table (2), the average age (standard deviation) among non-pregnant women was (36± 8) years.

Table.3:Gestational age

	Range	Average
Gestational Age	28-36	34 ±2

According to table (3), (38 ±2) weeks was the average gestational age (standard deviation).

Table.4: Pregnancy Termination

Method of termination	Number	Incidence
Vaginal delivery	191	63.66%
Cesarean	109	36.33%
Total	300	100%

According to table (4), Pregnancies terminated by cesarean section were 36.33 percent of the time, while vaginal delivery was 63.66 percent of the time.

Table.5: Non-pregnant and pregnant patients' Incidence of Epistaxis

Status	Number	Incidence of epistaxis	Incidence
Non pregnant	115	5	4.34%
Pregnant	300	11	3.66%

According to table (5), between pregnant and non-pregnant patients, there is no statistically significant difference in the incidence of epistaxis.

Table.6: Incidence of post partum hemorrhage between patients with/without epistaxis of pregnancy

	Number	Incidence
Epistaxis of pregnancy	1	10%
Non	21	5.07%

According to table (6), the results revealed that there was a statistically significant difference in the incidence of postpartum hemorrhage between patients with pregnancy epistaxis and patients who did not have pregnancy epistaxis.

IV. DISCUSSION

Epistaxis occurred 2.01% of the time in non-pregnant individuals and 2.56 percent of the time in pregnant patients in this study. In comparison to other research, this incidence is quite low. Who discovered that pregnant women were much more likely to suffer epistaxis, with a pregnancy incidence of 19.2 percent compared to 5.9 percent in non-pregnant individuals (p-value = 0.0001). This finding differs from that of (Suarez et al. 2020). Epistaxis is a common condition during pregnancy that may be linked to an increased risk of postpartum hemorrhage, according to the researchers. Eliciting a history of epistaxis can help identify women at risk of disrupted hemostasis, just as it can in the non-pregnant population. In our study, the incidence of postpartum hemorrhage in patients with pregnancy epistaxis was 10%, while the incidence of postpartum hemorrhage in patients without pregnancy epistaxis was 4.99 percent, with a statistically significant difference in p-value between the two results. This research backs up the long-held view that epistaxis and gingival bleeding are more common in pregnant women than in non-pregnant women. More crucially, our findings imply that a history of epistaxis during pregnancy is linked to a higher risk of postpartum hemorrhage, even after accounting for cesarean delivery and previous epistaxis. Our expectations were not met by this association (Butwick et al. 2020). We did not expect pregnancy-related epistaxis to be a risk factor for postpartum hemorrhage because we hypothesized that it was caused by estrogen-induced nasal mucosal edema and vascular alteration. However, it's likely that, in addition to these local mucosal changes, modest changes in hemostasis and clotting ability could lead to pregnancy epistaxis and, as a result, a higher risk of postpartum hemorrhage (Venkatesh, et al. 2020). Another explanation for our findings is that epistaxis is caused by changes in artery integrity or structure, which also puts women at risk for postpartum hemorrhage. These options will be investigated in future investigations. It's uncertain if a history of epistaxis during pregnancy is linked to a higher risk of spinal–epidural hematoma after neuraxial procedures (Reale et al. 2020). Because the occurrence of spinal– epidural hematoma in this patient population is uncommon,10 a large investigation would be necessary to test this link. The huge size of our study sample and the thoroughness of our data gathering are two of our study's advantages. Our study was adequately powered to detect even slight changes in outcomes between the two groups since the prevalence of epistaxis among pregnant women was higher than predicted. Seasonal or climate-related causes of epistaxis were eliminated as a confounding factor in our investigation because data was collected from each group continuously throughout the year (Escobar et al. 2020). Furthermore, the survey or data collectors were only involved in a few rare cases in the actual delivery or calculation of delivery-associated blood loss, minimizing the role of provider knowledge of a patient's bleeding history as a confounding factor (Klumpner et al. 2020). The fact that study data on epistaxis and bleeding risk factors, including medication use during pregnancy, was obtained retrospectively and thus vulnerable to recall bias, is one of the study's flaws. Another flaw was that we were unable to incorporate some study variables in our analysis because of their low prevalence, such as major family history and past bleeding history.

V. CONCLUSION

Epistaxis is a rare complication during pregnancy. Eliciting this history of active nosebleeds may aid to identify women at elevated risk for disrupted hemostasis, just as it does in the nonpregnant population. With this in mind, obstetricians and obstetric anesthesiologists may be better prepared to deal with postpartum bleeding, such as by getting preoperative blood bank specimens and having uterotonics on hand in the delivery room. The fundamental causes for this disrupted hemostasis will be investigated more in the future. There is no statistically significant difference in the incidence of epistaxis between pregnant and non-pregnant women, but there is a statistically significant difference in the incidence of epistaxis between women who have had epistaxis during pregnancy and those who have not had epistaxis during pregnancy (PPH). Finally, epistaxis is a common complication during pregnancy, with at least one out of every five women reporting two or more nosebleeds. Eliciting this history of active nosebleeds may aid to identify women at elevated risk for disrupted hemostasis, just as it does in the nonpregnant population. With this in mind, obstetricians and obstetric anesthesiologists may be better equipped to prepare for postpartum hemorrhage, such as by getting preoperative blood bank specimens and having uterotonics on hand in the delivery room. The fundamental

causes for this disrupted hemostasis will be investigated more in the future.

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